Date 21/09/21

Neeraj Appa

A.I Practical-08

SDS Page No. Date / /

Aim: Implement Adaboost ensemble learning algorithm for any dataset.

Algorithm:

1) import pandas
2) from sklearn import model selection
3) from sklearn ensemble impart Adaboost Classifier
4) Path for data CSV file
5) Give the Array value for data.csv file
6) Give the Array values for x and y
7) K-fold makes tree with split number
8) kfold model selection of splits and random state
9) Number of trees want to build before predictions
10) Higher number of trees give better voting option and performance
11) Cross val-score method used to calculate the accuracy of model x & y
12) Print result
13) Stop.

aip8.py - E:\fffiiles\college pracs and projects\AI\aip8.py (3.8.3)

File Edit Format Run Options Window Help

```
import pandas
from sklearn import model_selection
from sklearn.ensemble import AdaBoostClassifier
names = ['preg', 'plas', 'pres', 'skin', 'test', 'mass', 'pedi', 'age', 'class']
dataframe = pandas.read_csv("pima-indians-diabetes-data.csv", names=names)
array = dataframe.values
X = array[:,0:8]
Y = array[:,8]
seed = 7
num_trees = 30
#kfold makes trees with split number.
#kfold = model_selection.KFold(n_splits=10, random_state=seed)
#n_estimators : This is the number of trees you want to build before predictions.
#Higher number of trees give you better voting optionsand perfomance performance
model = AdaBoostClassifier(n_estimators=num_trees, random_state=seed)
#cross_val_score method is used to calculate the accuracy of model sliced into x, y
#cross validator cv  is optional cv=kfold
results = model_selection.cross_val_score(model, X, Y)
print("Neeraj Appari T073\n")
print(results.mean())
```

Python 3.8.3 Shell

File Edit Shell Debug Options Window Help

```
Python 3.8.3 (tags/v3.8.3:6f8c832, May 13 2020, 22:20:19) [MSC v.1925 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: E:\fffiiles\college pracs and projects\AI\aip8.py ==========
Neeraj Appari T073

0.7617774382480265
>>>
```